DRAFT ENVIRONMENTAL ASSESSMENT

PROPONENT:	Schellinger Construction	**SITE NAME:**	Carlson Gravel Pit
LOCATION:	Section 21, T30 N, R21 W	**COUNTY:**	Flathead

TYPE AND PURPOSE OF ACTION:

Schellinger Construction proposes to amend its existing gravel mining permit to add an additional 89.1 acres, increasing the total area to 156.3 acres. The site is east of Whitefish Stage and north of Hodgson Road and is a long-term asphalt, concrete and aggregate business formerly operated by Carlson Sand and Gravel (see Figure 1 – Area Map). An additional volume of 9,300,000 cubic yards would be extracted from the new area. Material mined from the new area would be excavated and transported to existing processing facilities within the existing permit (see Figure 2 – Site Map). This area is being included in the permit primarily to supply more gravel resources. Land in the original permit, which is mined to the currently approved 3,000 feet MSL and no longer needed for mining operations, would be reclaimed as pasture. Reclaimed land would be graded smooth with slopes to no steeper than 3:1, re-soiled and seeded to grass. Mining would progress eastward into the amended area in five separate phases (see Figure 3 – Phase Map), beginning with areas 1 and 2. Mining these first two areas in the five-area phase sequence would raise the Reclamation Bond to $782,016. Zoning approval for this amendment was granted by Flathead County Planning and Zoning on March 31, 2008. Final reclamation would be completed by October 2056. Hours of Operation would be changed to include Saturdays, and early start times at 5:00 a.m. for the concrete plant only. All other aspects of the existing permit remain the same.

This environmental assessment (EA) is required under the **Montana Environmental Policy Act (MEPA**). An EA functions to identify, disclose and analyze the impacts of an action, in this case operating a gravel pit on which the state must make a decision, so that an informed decision can be made. MEPA sets no environmental standards, even though it requires analysis of both the natural and human environment. This document may disclose many impacts that have no legislatively required mitigation measures or over which there is no regulatory authority. The state legislature has provided no authority in MEPA to allow DEQ or any other state agency to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law, such as the Opencut Mining Act, the Clean Air Act of Montana, or any other applicable state environmental regulatory law. Beyond that, a company may agree to voluntarily modify its proposed activities or accept permit conditions.

The state law that regulates gravel-mining operations in Montana is the **Opencut Mining Act**. This law and its approved rules place operational guidance and limitations on a project during its life, and provide for the reclamation of land subjected to opencut materials mining. This law requires that a reclamation bond, cash deposit or other financial instrument be submitted to the state to cover the complete costs of reclaiming the site to its approved, post-mining land use, if the permittee fails to reclaim the site as required by the law, the rules, and the permit.

The permit decision cannot be based upon the popularity of the project, but upon whether or not the proponent has met the requirements of the Opencut Mining Act, pursuant rules, and other laws pertaining to his proposed actions.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE AND EXAMPLE/GUIDANCE QUESTIONS	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	The expansion area is east of the current permitted site. Geologically, the area is composed of granular materials deposited during the last period of glaciation over 10,000 years ago. Materials to be mined are a mixture of gravels, cobbles, sands and sandy silts up to 100 feet thick (Smith 2004). Mining is proposed to stop at an elevation of 3,000 feet MSL. Below that depth is a layer of fine grained glacial silt and clay. These materials were deposited in distinct horizons and vary in texture. Topographic land forms are consistent with kettle and kame topography, characteristic of the entire northerly Flathead Valley floor. Disturbance of additional area will not significantly alter these area land forms. Proposed highwalls will vary in height based on the surface elevations. High walls may be as high as 100 feet. The reclamation plan proposes a mid bench for highwalls which exceed 40 feet. The bench would be placed mid way between the pit floor and the surrounding terrain. The granular matrix appears to be stable at the proposed 3:1 slopes. Placing a bench will reduce the eventual miscellaneous slough at the toe and provide access for slope management activities such as weed control. Average topsoil is six inches with 12 to 18 inches of overburden on top of the gravel resource (Soil Survey). All overburden will be stripped and saved for reuse in reclamation. Overburden will be stockpiled separately from the topsoil. All topsoil will be saved for reclamation. The fine grained silts may be subject to wind erosion. Erosion will be controlled by seeding using the approved seed mix. Soils used in reclamation will be 12 inches of fine grained overburden and six inches of topsoil. All material will be lightly compacted. Final reclamation will consist of disking the seed bed and planting of the approved seed mixture. Eventually the area would be used as pasture for livestock. Portions of the permitted site have been mined and reclaimed. Additionally, the berms along Whitefish Stage have been placed, topsoiled, seeded and trees planted. Dead trees have been removed and new stock planted. Reclaimed areas are uniform and do not show any indications of slope failure or sloughing.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION:	The perched shallow aquifer is 57 feet below the proposed pit floor elevation of 3,000 feet MSL. This means there is 57 feet of separation between the bottom of the pit and the top of the shallow aquifer. The groundwater flow direction is toward the south, southeast at a gradient of 0.003 (Applied Water 2007). The deep aquifer which is the water supply source for the majority of the surrounding residences is approximately 240 feet below the pit floor. This aquifer is separated from the pit floor by a thick layer of glacial till which is impermeable to downward moving water (LaFave 2004). The impermeable layer prevents any surface waters from affecting the deep aquifer. The nearest surface water is an isolated pond northeast of the proposed expansion area, Mallard Lake, west of the site, and the Whitefish River approximately ½ mile east. There are a number of water wells around the site, based on the records in the GWIC Water Well Database. The wells are generally drilled to penetrate the deep aquifer. The only well near the site in the shallow aquifer is up gradient located to the north, northwest. Five monitoring wells have been installed on the site since 2001, and three more are scheduled for the spring of 2008 within the requested amendment area. Ground water levels have been recorded during the year for each of the wells by Applied Water Consulting and Land and Water. Ground water data indicates the water level in the shallow aquifer fluctuates up to three feet based on snow melt, precipitation and infiltration in the pit area from the wash plant storage

	pond. Localized flow can be to the north and northeast at times due to the influences of runoff and wash water infiltration. Local surface water features are either below the elevation of the shallow aquifer or recharged from other sources, such as the Whitefish River. Since storm water does not leave the site, surrounding properties should not be impacted. Further protection is provided by the storm water protection plan included in the Operating Plan. Storm water runoff from the berms is collected onsite and directed to retention swales in pastures north and south of the active area. Special precautions would be taken to minimize possible contamination of the groundwater. No bulk fuel would be stored within this amended area. No contaminated soils will be brought to the site. Equipment will be serviced and fueled in the permitted site with the normal precautions to avoid spillage. Regularly scheduled water analysis was completed on August 28, 2007 and showed a decrease chloride in CGP-3 from the date of first occurrence, January 19, 2003. The well is completed in clay silts with low permeability. Discharge of wash water from the settling pond is most likely leaching minerals to this location. The other four monitoring wells do not have increased levels of chlorides. Water quality testing completed in 2007 determined there were no regulated compounds detected in the five monitoring wells. Expansion of the pit area with corresponding reclamation will not alter the ground water quality or quantity.
3. AIR QUALITY:	Air quality should not be degraded as a result of adding this area to the permit as little particulate is produced in the mining of the resource. The added resource would, however, extend the number of years the existing dust situation would be present. Dozers, loaders, and trucking equipment do cause some dusty conditions in disturbed soil sites, but the operator must comply with existing dust emission standards. Dust would be controlled around the site by water trucking open areas. The site is not within a Class I airshed. Prior actions to mitigate dust include paving the entry road, watering of the internal haul roads and active reclamation of mined areas. Particulate emissions from processing in the current permit area are regulated by the Air Quality Bureau. Expansion of the permitted area will not alter the particulate levels allowed in batching, crushing, washing or asphalt production. The site is within a PM 10 non-attainment area. Dust is a common result of gravel pit operations. Because this expansion will progress easterly as other finished areas are reclaimed, the overall disturbed area will never reach the full size of the permit area. Depending on staging, there may be an increase in exposed areas for brief periods of time, until reclamation is completed in mined out areas. Any increase in particulates should be minimized and short term until the seeded areas revegetate.
4. VEGETATION COVER, QUANTITY AND QUALITY:	There are no known rare or sensitive plants in the site area. Vegetation consists of pasture grasses, such as brome, blue grass, and quack grass. Some Ponderosa pine and Douglas fir are present. Existing vegetation would be removed and re-planted with pasture grasses compatible with the area. There are no rare plants or cover types present. The Flathead County Weed Control District has approved a Soil Disturbance and Weed Management Plan for the site proposed for operations. Only weed free seed will be used for reclamation. Periodic spraying for weeds is also required. Adherence to the plan will prevent the spread of weeds.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	The pre-mine area is used primarily for pasture. Surrounding areas also contain pasture, forest and agricultural land, and some have been converted to residential developments. Mining will cause a short term change in land use. When reclaimed, the area will again be pasture. Over time,

	Lodgepole and Ponderosa pine will naturally regenerate. Small and large mammals, game and song birds, raptors, insects and other small species will be displaced by the mining. In the long term the area will be available for habitat. Residential development has permanently displaced the same species. Many of the displaced species are adaptable to the semi urban environment, but populations and patterns have been altered by the residential intrusions. No substantial populations of displaced species have been identified in the area. The Montana Natural Heritage Program reports lynx as a species of special concern in the easterly portions of the valley. Lynx do not typically reside in semi rural areas due to the lack of undisturbed habitat. Lynx also feed on snowshoe hare and other small animals. The area is open pasture land and not ideal habitat for the prey animals. Lynx are unlikely to frequent the area. Bald eagles are listed as endangered. Eagles prefer forested areas along rivers and lakes, nest in timber stands and feed on fish, water fowl, small mammals and amphibians. Eagles are also known to become accustomed to urban environments. The mine expansion will cause short term loss of pasture land. Pasture lands do not support large populations which are part of the eagle diet. There is minimal predicted impact on eagle populations. No fish or aquatic species will be impacted by this action. Expansion of the permitted area will not affect any identified plant or animals in the area.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected. Eagles, grizzly bear, bull trout and the yellow belly cuckoo are listed species. None are known to frequent or inhabit the site. No wetlands will be impacted. The nearest wetland is the isolated pond northeast of the proposed expansion area. No operations are proposed for the slopes that would run off into this wetland. Other species are listed as being of special concern; none are identified as present at or near the site. Overall, the irreversible change from rural agricultural to residential, which is occurring around the area, represents a greater potential for to local environmental resources than short term mining.
7. HISTORICAL AND ARCHAEOLOGICAL SITES:	Although there are cultural values in the general area, much of this site has been previously disturbed by modern man by farming. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator would give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation would be routed around the site of discovery for a reasonable time until salvage could be conducted. The State Historic Preservation Office would be promptly notified.
8. AESTHETICS:	The site is located in a scenic, but not unique area. There may be a temporary deterioration of aesthetics while the operation was under way. However, reclamation would return the area to a visually acceptable landscape. Berms have been built along Whitefish Stage Road to deflect sound and to limit visual impacts. They are planted with grasses and small pine or fir trees. The expansion area would be mostly shielded from view by the berms. Hours of operation for the site would not be changed for most operations and are 7:00 am to 7:00 pm, Monday through Friday with a maximum of 15 consecutive working days from 6:00 a.m. to 10:00 p.m., Monday through Saturday. Periods of extended 15 days must be separated by 30 days. Loading, hauling and maintenance can occur on any Saturday, and emergency sand and gravel for highway safety may occur anytime. This amendment would change the hours of operation for the concrete plant only. Sales of concrete need to start earlier in the morning due to the construction trades. Concrete trucks have to begin arriving by 6:00 a.m. during the hot summers since finishers shut down when the days are in the 90's and 100's. The amendment would allow the concrete plant and

	delivery trucks to start up at 5:00 a.m., Monday through Friday, and from 5:00 a.m. to 12:00 p.m. on Saturdays. No operations of any kind, other than emergency winter road sand loading, can occur on Sundays. Noise levels generated by a crusher, concrete plant, asphalt plant, dozers, loaders and truck traffic at the pit are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels from ordinary activities such as close conversation are 60 decibels and music from a radio at 70 decibels is considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure to employees on site without hearing protection could lead to hearing loss. The nearest residence is outside the area which would be impacted by dangerous noise levels.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:	There are no unusual demands on land, water, air or energy anticipated as a result of this amendment. A wash plant will continue to operate. The term of operation will increase but the volume of water needed for operation will not increase. A water right has been approved for the well serving the wash plant. A second water right from the Whitefish River is available for needed water.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:	There are no other known impacts on environmental resources anticipated as a result of this amendment.

IMPACTS ON THE HUMAN POPULATION

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY:	Heavy equipment and facilities including trucks and loaders will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents. Excessive and prolonged noise and light could impact nearby residents and induce difficulty sleeping, but ongoing operations are not planned for nighttimes. Nor does this amendment alter the operating hours of the existing facility, other than the concrete plant. This proposed operation should not significantly affect human health. Whitefish Stage Road is a State Secondary Highway. The approach and operations on and to Whitefish Stage are governed by the MDOT. The MDOT has adopted standards for Traffic Mitigation Impact Analysis. Permitting an expansion will not cause an increase in traffic to and from the site. Permitting the expansion will increase the time period of use. Currently the single approach is stop controlled. Site distance for drivers passing by the pit entrance on the highway is adequate for the posted speed, and the approach is paved for a depth of 300 feet back onto the permit to reduce tracking mud and gravel onto Whitefish Stage Road. According to the MDT, the recent annual daily traffic (ADT) data and future growth rate projections on Whitefish Stage Road is taken from Flathead County map sheet 4, supplement A, station 47. The 2004 ADT for this site is 1,680 and the annual growth rate is 2.5%. Therefore, the calculated ADT for the year 2022 would be 2620, and for the year 2056 ADT it would be 6070 (Cook, 2008).
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:	Some of the acreage listed in the Type and Purpose of Action would be taken out of agricultural use and put into industrial/commercial use. Upon completion of mining, the land would be reclaimed to grassland. Overall in the long term all disturbed areas would be returned to pasture, which is their current use.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:	Existing employees would mainly be utilized for this operation. There is low potential that this amendment would create a significant number of new jobs. Existing jobs at this site would be extended into the future.
14. LOCAL AND STATE TAX	Additional taxes may be generated for the county and state in the form of income to the applicant

BASE AND TAX REVENUES:	and fuel and highway taxes paid by hauling equipment. Maintaining a competitive supply of aggregate resources could stem the increasing cost to taxpayers of road and highway construction.
15. DEMAND FOR GOVERNMENT SERVICES:	The operation would require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:	City/County zoning clearance has been obtained.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:	No wilderness or recreational areas are nearby or accessed through this tract.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:	The project would not add to the population or require additional housing.
19. SOCIAL STRUCTURES AND MORES:	The area has generally been utilized for commercial and industrial development in the past. This proposal would add more land to this existing aggregate business. The area is underlain by a high quality deposit of sand and gravel and it is predictable that development of the resource would occur.
20. CULTURAL UNIQUENESS AND DIVERSITY:	This area has gradually shifted from forest and agricultural to residential and industrial use. The expansion of the pit could slow the current transition from rural to suburban residential use.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	None known.

22. Alternatives Considered:

A. No Action Alternative: Under this alternative the amendment for the Schellinger permit would be denied. The land would remain as pasture or hay land until other uses of the land were proposed and implemented. Carlson would be denied full utilization of this property.

B. Proposed Action: Under this alternative the amendment would be approved as described. The operation would increase in size from 67.2 to 156.3 acres over a period of 50 years with reclamation following in depleted areas. An additional 9,300,000 cubic yards, would be excavated and removed from the site, and the date of final reclamation would be extended from 2022 until 2056. Hours of operation would be changed to allow early start up for the concrete plant at 5:00 a.m. Monday through Saturday. Saturday concrete plant operation would shut down at 12:00 p.m.

23. Public Involvement, Agencies, Groups or Individuals contacted: Flathead County Planning Department, MDT Traffic Data Collection & Analysis.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed: Flathead County Planning Department (zoning clearance), Flathead County Weed Control Board (weed control plan approval), DEQ Air Resources Management Bureau (air quality permits), Department of Natural Resources and Conservation (water rights permits).

25. Magnitude and Significance of Potential Impacts: The proposed Carlson amendment would have long-term but non-significant impacts from the removal of additional gravel at the proposed site. The removal of the gravel would be irreversible and irretrievable. There would be no impacts on any surface waters as there would be no surface water discharges and no withdrawals of water for operational water needs. Impacts to

groundwater would be minimal, as water would be withdrawn through approved wells for operational water needs. All fuels stored on site would be contained with secondary containment to minimize the risk of fuel spills getting into the groundwater. Schellinger has air quality permits for the crusher and asphalt plant and appropriate dust suppression equipment is used on these facilities. Water would be used to control dust within the plant area and on the access road. The berms surrounding the gravel pit are vegetated, which helps control dust off the berms and helps to mitigate visual and sound quality. Impacts to wildlife would be temporary since the pit would be reclaimed to pasture once gravel operations ceased. Given the large expanse of open and undisturbed lands north and east of the site, the proposed operation is not anticipated to have significant impacts to any wildlife species. Truck traffic from the pit would not add to the daily traffic load on Whitefish Stage Road, since activity levels would be unchanged. It would, however, continue to have impacts on local traffic longer into the future.

26. **Regulatory Impact on Private Property:** The analysis conducted in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application nor restrict the use of private property so as to constitute a taking. The mitigations imposed in the Agency Modified Alternative are necessary to comply with the visual and noise mitigation requirements of the Opencut Mining Act.

References cited:

Applied Water Consulting LLC. 2007. 2007 Annual Groundwater Monitoring Report for Carlson Sand and Gravel, LLC.

Soil Survey. 1960. Soil Survey of the Upper Flathead Valley Area, Montana. U.S. Dept. of Agriculture, Soil Conservation Service.

Cook, Calvin. 2008. Email communication from Calvin Cook, MDT-Statistician, Traffic Data Collection & Analysis. Flathead County Map Sheet 4, supplement A, station 47, S-292 (N Whitefish Stage Rd), MP 9.5, S of MT 40.

LaFave, John I., Larry N. Smith, and Thomas W. Patton. 2004. Ground-Water Resources of the Flathead Lake Area: Flathead, Lake, Missoula, and Sanders Counties, Montana, Montana Ground-Water Assessment Atlas 2.

Noble, R.A. and J.A. Stanford. 1986. Ground-water Resources and Water Quality of Unconfined Aquifers in the Kalispell Valley, Montana. Montana Bureau of Mines and Geology, Open File Report 177.

Smith, Larry N. 2004. Surficial Geologic Map of the upper Flathead River valley (Kalispell valley) Area, Flathead County, Northwest Montana. Montana Bureau of Mines and Geology Ground-Water Assessment Atlas No. 2, Part B, Map 6.

RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐ EIS ☐ MORE DETAILED EA ☒ NO FURTHER ANALYSIS

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA:

Written By: **Rod Samdahl, Environmental Science Specialist**

(Signature) (date)

Figure 1 - Area Map

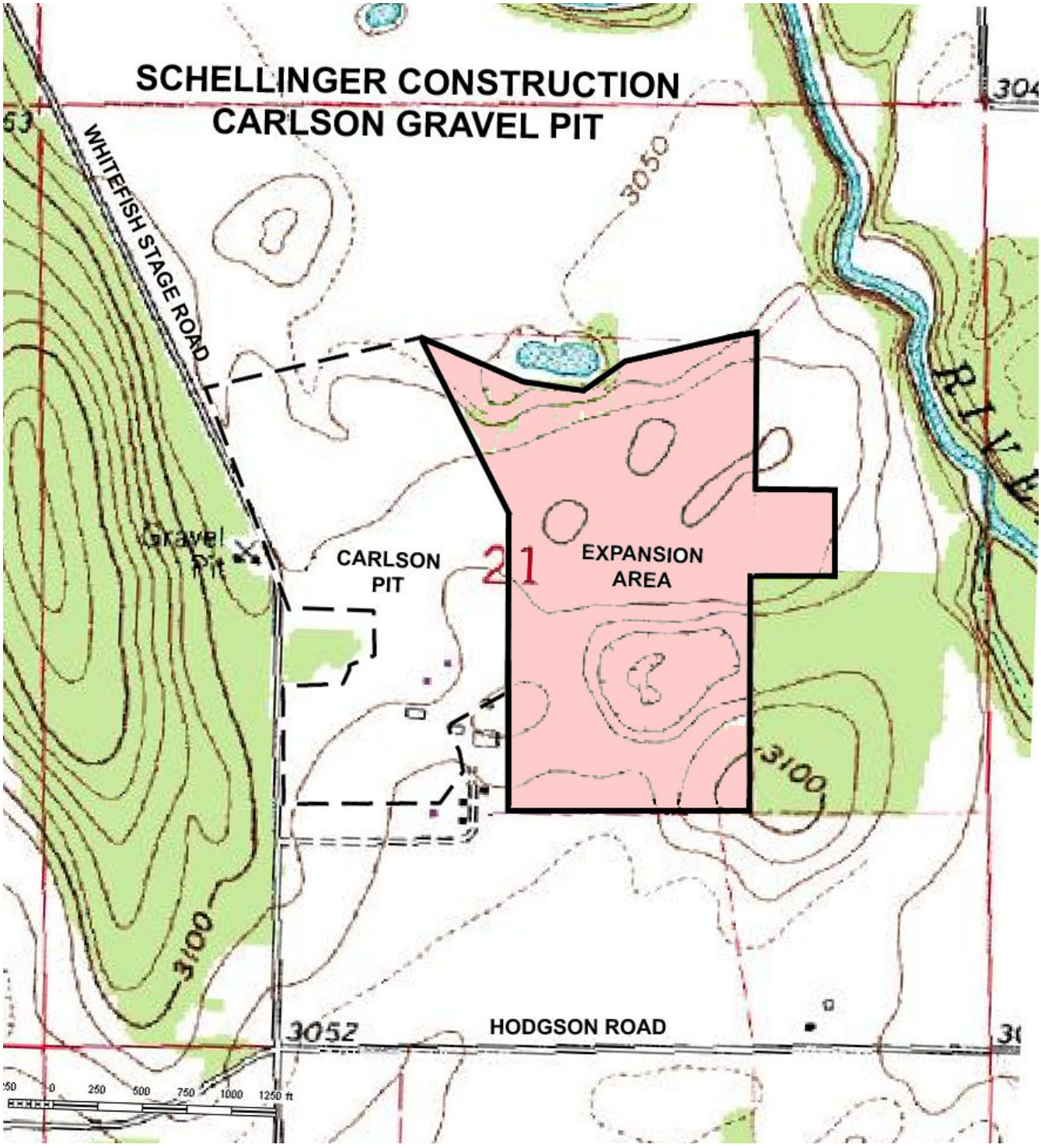


Figure 2 – Site Map

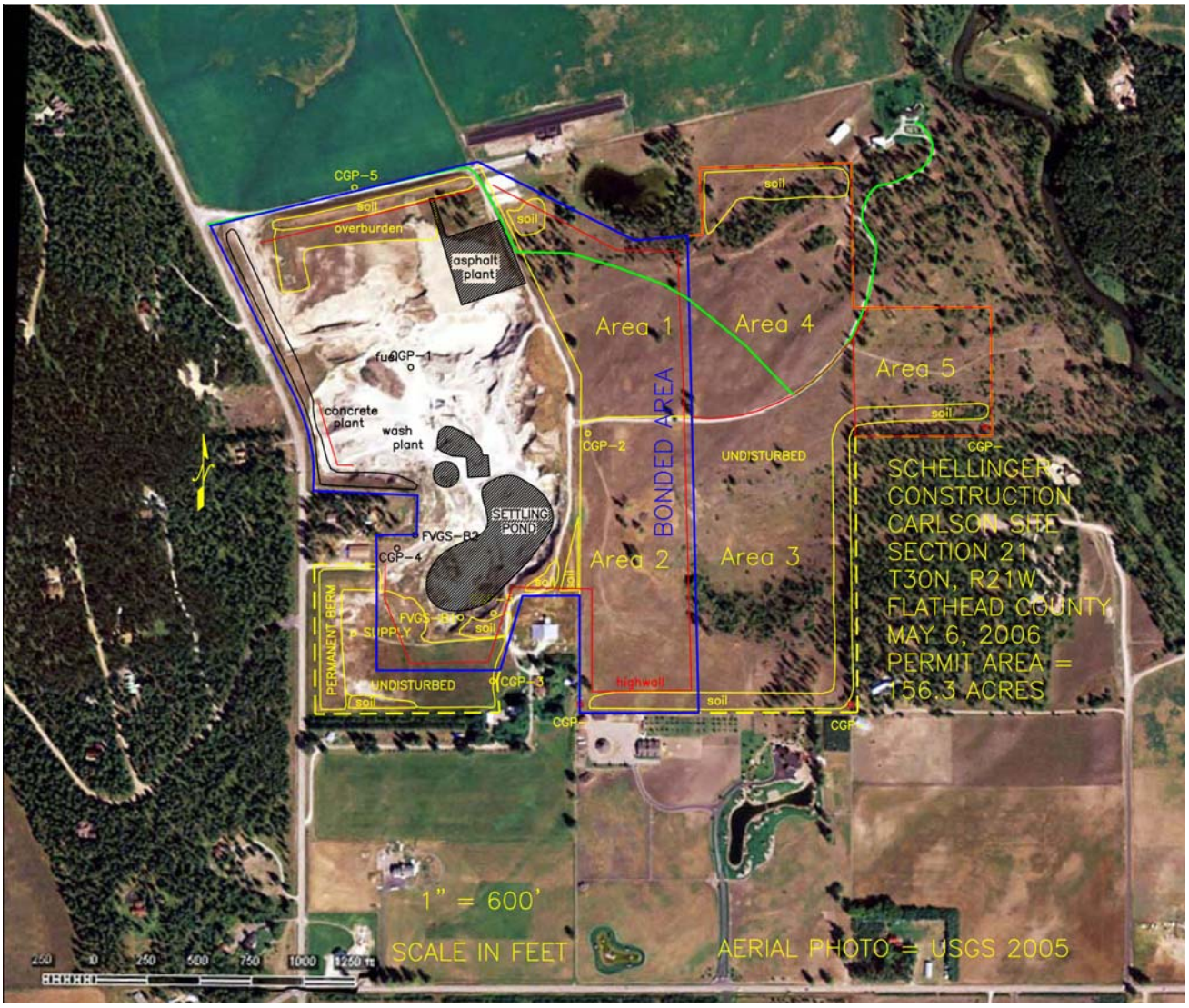
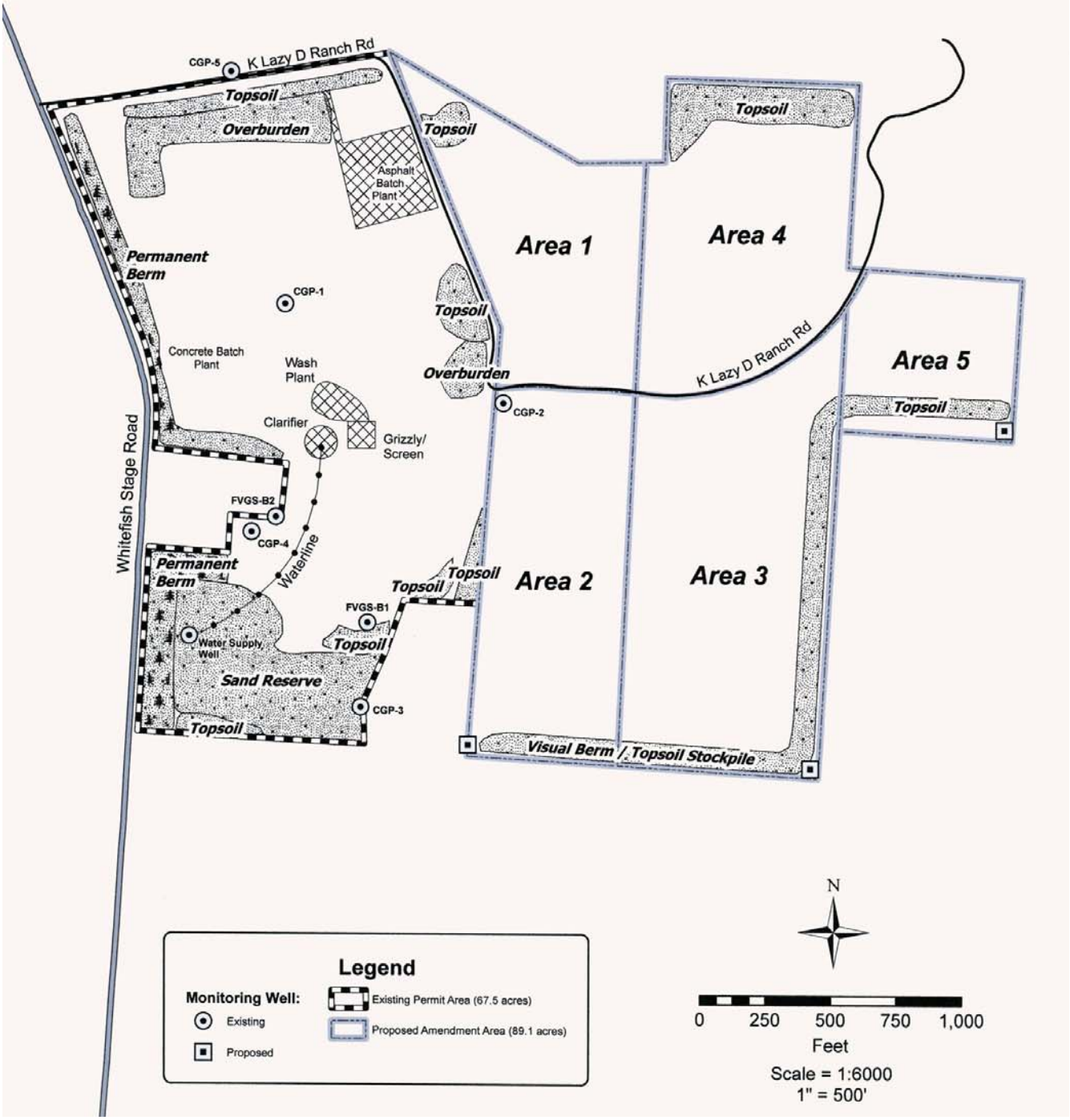


Figure 3 – Phase Map

Mining Sequence and Monitoring Well Locations



Attachment 1

PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

PROPERTY DESCRIPTION: Section 21, T30N, R21W, Flathead County

COMPANY NAME: Schellinger Construction, Carlson Site

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.